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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/526,127 03/15/00 USAMI

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EXAMINER

FERGUSON, L

ART UNIT

PAPER NUMBER

1774

7

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/526,127

Applicant(s)

USAMI ET AL.

Examiner

Lawrence Ferguson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections – 35 USC § 103(a)

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Raychaudhuri et al. (EP 0747895 A2) in view of Hurditch et al (U.S. 5,952,073).

3. Raychaudhuri teaches the storing and reproducing of digital information within a compact disk (page 2, lines 16-25). Raychaudhuri teaches a recording layer and a first minimum in reflectance (page 2, lines 40-41). Raychaudhuri discloses a substrate having a recording layer and light reflecting layer with the thickness of the recording layer and the reflecting layer being selected such that the R_{\min} reflectivity (first minimum reflectance) is greater than 70% for a laser wavelength of about 780nm (page 3, lines 8-13). Raychaudhuri discloses a typical plot (Fig. 1) of the reflectivity versus the thickness of a recording element (page 3, line 24). Raychaudhuri discloses 14 to 30 thickness units (arbitrarily chosen) from the reflectivity versus thickness curve (page 3, lines 43-45). Raychaudhuri discloses the substrate is transparent (page 3, lines 49-50). Raychaudhuri discloses a writable compact disc with a write and read laser (column 4, lines 1-2). Raychaudhuri discloses the substrate includes a guide groove (page 4, line 9). Raychaudhuri

discloses the recording layer being 800 angstrom thick (page 6, line 3) which is equivalent to 80nm. Although Raychaudhuri does not explicitly disclose irradiating the disc, it would be obvious to one of ordinary skill in the art that in order to write on the disc, the disc would have to be irradiated with the laser.

Although Raychaudhuri does not explicitly disclose the half-width of the pregroove, thickness percentage of the recording layer or the laser wavelength, it would have been obvious to one of ordinary skill in the art to optimize the components since discovering the optimum or workable ranges involves only routine skill in the art. Raychaudhuri does not disclose a spiral pregroove with a depth or the recording layer containing a dye.

Hurditch teaches a transparent substrate (column 7, line 16) used in DVD-R applications (column 7, line 44) having a dye-containing recording layer with a spiral tracking groove (often referred to as the pregroove) with the groove having a depth of 100-250nm (column 7, lines 46-53). Hurditch teaches depositing the dye containing layer onto the grooves and on adjacent lands between the grooves (column 2, lines 39-43).

Raychaudhuri and Hurditch are analogous art because they are from the same field of optical recording media. It would have been obvious to include the dye in the recording layer of Raychaudhuri since Hurditch shows that dyes in grooves are known and have the capability of increasing photostability in optical recording layers. Additionally, it would have been obvious to one of ordinary skill in the art to include the spiral pregroove with a depth of 100-250nm in the transparent substrate of Raychaudhuri since Hurditch shows that this is a commonly used depth within the art. Additionally, the depth of the spiral pregroove is an optimizable feature of the recording layer.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



Lawrence D. Ferguson
Examiner
September 7, 2001

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

